DT14 Rec'd PCT/PTO 2 1 DEC 2004

Express Mail Label No. EL988603127US

bel No. EL988603127US
PTO-1390 (Rev. 12-2004)
Approved for use through 3/31/2007. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

ATTTORNEY'S DOCKET NUMBER 112624.00082 U.S. APPLICATION NO. (If known, see 87 CFR 1.5)

CON	NCERNING A SUBMISSIO	10/519206											
PCT/US	TIONAL APPLICATION NO. S2003/21153	INTERNATIONAL FILING DATE 2 JULY 2003	PRIORITY DATE CLAIMED 2 JULY 2002										
TITLE OF INVENTION A HIGH RESOLUTION TYPING SYSTEM FOR PATHOGENIC BORRELIA													
APPLICANT(S) FOR DO/EO/US KEIM, Paul S.; FARLOW, Jason													
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:													
1. This is a FIRST submission of items concerning a submission under 35 U.S.C. 371.													
2. This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371.													
This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.													
4.	The US has been elected (Article 31).												
5.	A copy of the International Application as filed (35 U.S.C. 371(c)(2))												
	a. Is attached hereto (required only if not communicated by the International Bureau).												
	b.  has been communicated by the International Bureau.												
	c. Is not required, as the application was filed in the United States Receiving Office (RO/US).												
6.	An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).												
	a. is attached hereto.												
	b. has been previously submitted under 35 U.S.C. 154(d)(4).												
7.	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))												
	a. are attached hereto (required only if not communicated by the International Bureau).												
	b. have been communicated	b. have been communicated by the International Bureau.											
	c. have not been made; how	vever, the time limit for making such amendr	nents has NOT expired.										
	d. have not been made and	will not be made.											
8.	An English language translation of the	he amendments to the claims under PCT Ar	ticle 19 (35 U.S.C. 371(c)(3)).										
9. 🔽	An oath or declaration of the inventor	r(s) (35 U.S.C. 371(c)(4)).											
10.	An English language translation of th Article 36 (35 U.S.C. 371(c)(5)).	ne annexes of the International Preliminary E	xamination Report under PCT										
Items	s 11 to 20 below concern document(s	s) or information included:											
11. 🗹	An Information Disclosure Statement	t under 37 CFR 1.97 and 1.98.											
12. 🔽	An assignment document for recording	ng. A separate cover sheet in compliance w	ith 37 CFR 3.28 and 3.31 is included.										
13.	A preliminary amendment.												
14.	An Application Data Sheet under 37 CFR 1.76.												
15.	A substitute specification.	A substitute specification.											
16.	A power of attorney and/or change of address letter.												
17.	A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.												
18.	A second copy of the published International Application under 35 U.S.C. 154(d)(4).												
19.	A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).												
20 🔽	Return Postcard Other items or information:												

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Page 1 of 2

PTO-1390 (Rev. 12-2004)
Approved for use through 3/31/2007. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

U.S. APPLICAT	TON N	O (if know	n, see 3	37 CFR 1.	5)	INTERNATIONAL AP	PLICA	ATION NO.	Г	ATTORNEY'S DOC	KET NUMBER
T	U /	519	121	]6		PCT/US2003/2115	53 .		1	12624.00082	
21. The followi	-										
a) Basic national fee\$300.00									\$ 300		
b) Examination fee\$200.00									$\vdash$	200	
c) Search fee\$500.00									H	500	
TOTAL OF ABOVE CALCULATIONS = \$1000.00									\$	1000	
Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.											
Total Sheets	Extra					r of each additional 50 or fraction of (round up to a whole number)					
- 100 =			/50 =					x \$250.00	\$	0 7	
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).									\$	,	
CLAIMS		NUM	BER FIL	ED	NUMBER EXTRA RATE			RATE	\$		
Total claims	3 .	15		- 20 =	-20 = 0 x			\$50.00	\$	0 .	
Independent clai	ims	7		-3= 4			x	\$200.00	\$	800	
MULTIPLE DEP	ENDEN	IT CLAIM	(S) (if ap	plicable)			+	\$360.00	\$	0	
						TOTAL OF ABOVE				1800	
Applicant of by ½.	claims s	mall entity	/ status.	See 37 C	FR 1.	.27. The fees indicated ab	ove a	re reduced	\$		
								SUBTOTAL =	\$	900	
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).								\$			
TOTAL NATIONAL FEE =								\$	\$ 900		
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +								accompanied +	\$	40	
						TOTAL F	EES E	NCLOSED =	\$	940	
										nount to be unded:	\$
										nount to be arged:	\$ 940
a. A chec	ck in the	amount e	of \$			to cover the abo	ve fee	s is enclosed.			_
a. A check in the amount of \$ to cover the above fees is enclosed.  b. Please charge my Deposit Account No. 17-0055 in the amount of \$_940 to cover the above fees.  A duplicate copy of this sheet is enclosed.											
c. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit t Account No. 17-0055 A duplicate copy of this sheet is enclosed.											
d. Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.											
NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.											
SEND ALL COR	RESPO	ONDENCE	E TO:					n		, 1	$\mathcal{M}$
QUARLES & BRADY LLP BANA								Dark	10	ra I W	Mer
One Renaissance Square Signature											
Two North Central Avenue Barbara J.								Barbara J. I	Luth	ner	
Phoenix, Arizona 85004  (602)230, 5502											
(602)230-5502 (602)229-5690 (Fax) 33,954											
(602)229-3690 (Fax)  REGISTRATION NUMBER									NUMBER		

FORM PTO-1390 (REV. 12-2004)